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ABSTRACT

Past efforts to improve education have focused on curriculum and instruction. Some schools are pursuing more systemic year-round schooling and 4-day week reforms. The Waihe'e Elementary School and the Star of the Sea School, both in Hawaii, are implementing single-track plans for year-round schooling to improve academic achievement, social-affective behaviors, and community life (Waihe'e) and to provide flexibility in the core curriculum (Star of the Sea). Satisfaction remains high for 4-day school weeks in New Mexico and Colorado. Studies suggest that feared declines in academic performance have not occurred, with tentative evidence of improved achievement. In Oregon, 4-day week schools elicited positive responses from staffers, parents, and students. The saved time translated into increased savings, more instructional time, more time for extracurricular activities, and improved attendance. In Hawaii, the Ma'ili and Ha'aheo Schools implemented 4-day weeks with longer instructional days that have increased achievement and teacher, parent, and student interaction. Evidence suggests that year-round schooling can be successful depending on the reform context, and that -day weeks, in general, work in small/rural school districts. (Contains 14 references.) (TEJ)

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Modified School Schedules: A Look at the Research and the Pacific

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Past efforts to improve education have tended to focus on curriculum and instruction. In the Pacific as elsewhere, there is now increasing interest in pursuing systemic change in public schooling. Educators are taking a new look at many of the ways schools are run. This paper describes alternatives to the traditional school schedule, and discusses what we know about their impact on student achievement.

Among the approaches to modifying the traditional school schedule are the expansion of the school year through year-round schooling and the reduction of the traditional five-day school week into a four-day school week. Both of these approaches are being tried in Pacific schools. Research indicates that the reason schools go into modified school schedules is to address multiple needs relating to staffing, facilities, curriculum, and the supervision of children of working parents. Schools that responded to specific challenges in their communities through schedule modification have been satisfied with the results.

Year-Round Schooling

Year-round schooling is a rescheduling of the school year from nine months to twelve months. The total number of school days and vacation days is the same as in the September to June school year. In year-round schooling, however, both school days and vacation days are spread out over twelve months (Year-Round Schooling, 1988).

Year-round school is neither new nor untested. In 1976, the number of year-round schools in the U.S. peaked with 600 nationwide; by 1980, that number had declined to 287 (Howell, 1988). Historically, year-round schooling was adopted to meet the needs of particular communities. These needs related to accelerating learning for immigrant children, expanding curriculum offerings, and/or addressing rising costs of building new facilities at times of decreasing budgets and increasing enrollments (PREL, 1992). Two basic models exist: the single-track and the multitrack models.

Single-Track

The single-track 45-15 plan divides the year into four nine-week terms with four three-week vacations or intersessions. It allows for 36 weeks or 180 days of school. All students in the school follow the same schedule. Intersessions may be used for vacation, or teachers and students may choose to spend the intersession on special programs. The programs may focus on traditional curriculum areas, remediation, enrichment, or elective on-campus or off-campus learning opportunities.

There are numerous advantages of a single-track plan. A single-track:

- provides consistent pacing of instruction.
- breaks up the long three-month summer vacation to reduce learning loss.
- provides vacation in each season of the year.
- allows flexible time for substituting if a teacher wants to work.
- costs about the same as a September to June calendar.

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Among its disadvantages are that the single-track schedule does not coincide with the September to June calendar of other schools and that the single-track schedule requires more beginnings and endings of instructional periods than do some other year-round calendars (Ballinger, Kirschenbaum, & Poinbeauf, 1987). In the figure below, Track A represents a typical single-track plan.

Multitrack

Multitrack plans are usually instituted to address over-enrollment of students for the available facilities (PREL, 1992). In this arrangement, students are divided into two to four groups. At any given time, one track of students is on vacation, providing 25% additional space in the four-track school. Each track has its own schedule.

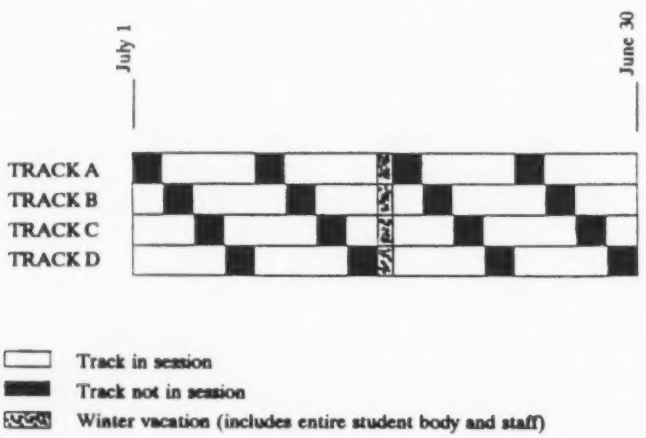
The advantages of the multitrack plan are that it allows a minimum of 180 days instruction; increases a school's space capacity; and contributes to substantial savings in both operational and capital outlay costs.

Among the disadvantages of the multitrack plan are that it requires:

- a greater amount of moving from room to room if a teacher is assigned to "rove" between tracks.
- a greater amount of shared space for storage of teacher and student materials.
- additional planning of schedules and more communication between those on-track (in school) and those off-track (out of school).

There are a number of scheduling options in either the multitrack or single-track mode (e.g., 60-20 plan, 90-30 plan, quinmester plan, Concept 6, etc.). The following figure displays the 45-15 multitrack plan:

45-15 MULTIPLE TRACK PLAN
(or 45-15 Staggered Plan)



Year-Round Schooling in the Pacific

In Hawaii, Waihe'e Elementary School in the Maui District and Star of the Sea, a private high school on Oahu, are implementing year-round schooling.

Waihe'e Year-Round Program

The Waihe'e program is a single-track, modified 45-15 plan. Teachers and students attend school for a nine-week quarter of 45 school days and then take an intersession of 10-15 days. This sequence of nine-week academic sessions and short intersessions is repeated four times each year, thereby providing the usual 36 weeks of school. All students and teachers are in school and out of school at the same time.

At Waihe'e School, as at some other year-round schools, intersessions are used to offer short academic classes to students as an alternative to taking vacations. The classes incorporate both remedial and enrichment activities so that the students' academic lessons are integrated with high interest, hands-on learning experiences. Participation is optional for both students and teachers.

The rationale for adopting the new calendar at Waihe'e School was to provide students and the community with the most effective and positive educational experiences possible. By breaking up the nine-month school year into four quarters distributed more evenly throughout the calendar year, the school hoped to improve academic achievement of the students, social/affective behaviors, and community life. According to an evaluation report on the 1989-90 school year, most reactions to the Waihe'e year-round program are favorable (Greenfield, 1990).

Star of the Sea

Star of the Sea School on Oahu initiated what it calls "Year-Round Education" during the 1992-93 school year. The school considers Year-Round Education as "participatory education at its highest level. It allows us the flexibility to provide quality educational choices within the core curriculum while maintaining a high level of academic excellence and Christian value education" (Star of the Sea School, 1992).

Star of the Sea School's plan provides 180 learning days, 29 optional intersession days, and 19 summer school days, which are also optional. Students are able to receive a possible total of 228 learning days.

Palau

Recently, a modified year-round schooling plan was

initiated in Palau at Palau High School and Meyuns Elementary School. The Palau High School plan reduced the summer vacation from three months to two months. At Meyuns Elementary School, the school year was divided into four quarters, with a three-week intersession after each quarter. This year-round schooling program was executed by the principal with the support of the parents and community after the principal was persuaded of its merits at a year-round schooling conference held in San Diego in February, 1991.

The Four-Day School Week

In addition to year-round schooling, another modification of the traditional schedule is the four-day school week. Current four-day districts have borrowed the idea from educational pioneers in the early 1970s. Reasons for adopting this schedule have been to conserve energy, improve instruction, or reduce costs (Pope & Gillian, 1984).

New Mexico and Colorado are states whose four-day districts are considered to be successful by state leaders (Pope & Gillian, 1984). Districts in these states have several years of experience with the four-day week. Therefore, they are perceived as the "experts in the nation," and are serving as models for other districts studying the alternative school week calendar.

The Four-Day Week in New Mexico

Ten school districts in New Mexico are currently operating on a four-day school week schedule. Eight districts are on the schedule for the entire school year, while two are on the schedule during the winter months only.

The main reason New Mexico school districts chose to implement a four-day school week was to reduce operating costs, primarily through reduced energy use. Fuel and electricity costs decreased by 10-15% when the switch was made to the four-day week. In addition, many districts reported a reduction of 10-20% in transportation costs (Grau & Shaughnessy, [1987]).

The primary concern about implementing the four-day week in New Mexico was that students not suffer academically. An evaluation report indicates that student achievement was not adversely affected by the switch to the four-day school week. In fact, several districts reported overall gains in student achievement when the new schedule was implemented, probably due to an increase in non-interrupted instructional time during the four-day schedule (McCoy, 1983). The evaluation report also states that scores on the standardized achievement test (California Test of Basic Skills) of four-day week students from 1982-83 were comparable to statewide norms and slightly-to-substantially better than national norms. Also during the same year, in seven of the ten districts on the four-day schedule, 100% of the students tested passed the New Mexico High School Proficiency Examination. In the other three districts, 99%, 96%, and 80% of the students tested earned passing scores on this test (McCoy, 1983).

For the "grandfather" of the four-day schedule--Cimarron Public Schools--cost efficiency has risen as expected; students, teachers, and parents support the new schedule; and, most importantly, students have not suffered academically. The results of test analyses showed more gains annually on the four-day schedule than had been made on the five-day schedule. On other tests, Cimarron students scored above both New Mexico and national norms (Grau & Shaughnessy, [1987]).

The Four-Day Week in Colorado

Colorado patterned their four-day school week after the Cimarron Public Schools in New Mexico for basically the same reason--to reduce operating costs. The districts in Colorado are rural in nature, extend over large geographic areas, and have small enrollments. All face declining enrollments and decreasing state revenues (Grau & Shaughnessy [1987]).

The twelve school districts in Colorado that converted to the four-day schedule with approval from the State Board of Education decided to coordinate their evaluation efforts. Arrangements were made with the Office for Rural Education at Colorado State University to conduct the study.

The evaluation study analyzed scores on the standardized tests administered by each school district to gauge student achievement, as well as comparison scores when possible under both kinds of school calendar. Reliable data were located for thirteen comparisons of student achievement on both a five-day and four-day schedule. The comparisons revealed that students under a four-day schedule show some achievement gains and some losses. The pattern was not consistent and indicated need for more research. Of particular note was that there is no clear evidence that student achievement suffers under a four-day schedule (Grau & Shaughnessy, [1987]).

Relative to benefits resulting from the four-day schedule, budgetary savings came as a surprise to no one. In other areas, the realities of implementing the four-day schedule surprised virtually everyone involved. Colorado administrators found that the new schedule positively affected student and teacher attendance, the

conduct of co-curricular activities, the manner in which teachers planned for instruction and taught, the kind of textbooks they used, and the attitude of nearly everyone (Richburg and Wood, 1982).

The Four-Day Week in Oregon

In Oregon, 71% of all districts in the state are considered to be made up of small schools. The isolated rural location of many of these schools means long bus rides both to school and to other schools to participate in athletic events. The decrease in financial resources is forcing many small schools in Oregon to cut back on programs and to look for new ways to keep quality programs and maintain standards.

Beginning with the 1982-83 school year, two Southern Oregon schools (Prospect and Days Creek) implemented the four-day school week on a one-year trial basis. A study in 1987 found them still operating on this schedule, along with five other districts in Eastern Oregon (Burnt River, Cove, Union, Paisley, North Powder). Two districts (Scio, Rogue River) implemented the new schedule but returned to five-day weeks.

The enthusiastic response from parents, staff, and students on annual surveys and interviews has led Oregon to the conclusion that "there's more with four!" Participating school districts are claiming more savings, more instructional time and student contact time, more time for staff development, more time for co-curricular and extra-curricular activities, more time for families/personal business, more regular attendance by students and staff, more positive feelings and high morale, and more parental involvement and support. While overall achievement gains have been difficult to assess because cumulative test data for small schools is sometimes lacking, all districts maintained or showed slight increases in achievement. At any rate, the results have not shown that the four-day week has an adverse effect on student learning (Reinke, 1987).

The Four-Day School Week in the Pacific

The traditional five-day school week prevails in the Pacific. However, both Ma'ili Elementary School on Oahu's Leeward Coast and Ha'aheo Elementary School on the Big Island in the State of Hawaii are now operating on a four-day week. The four-day week was also tried in Kosrae of the Federated States of Micronesia.

Ma'ili School's Modified Schedule

Ma'ili Elementary School is a School/Community-Based Management (SCBM) school. SCBM is a vehicle in Hawaii's public schools for local participation and shared decision-making. The process enables teachers, parents, administrators, students, support staff, and community members to all work together to make policy decisions for the school. These decisions may be in the areas of curriculum, instruction, organization, and program assessment.

Ma'ili, because of its remote location on Oahu, has not been able to retain teachers on its staff. Almost all of the teachers commute to work from Honolulu, and for some of them the drive to the school is almost two hours long. In addition, the majority of the teaching staff consists of probationary teachers who immediately seek transfers to other schools upon receiving tenure (Young, 1992).

The Ma'ili administration and faculty have also been seriously exploring ways of bridging the gap between the school and community, as well as enhancing the instructional program to increase student motivation in learning and academic achievement. These concerns as well as staff turnover fed into the school's decision to adopt the four-day modified schedule, which Hawaii's Board of Education unanimously approved at its May 16, 1991 meeting.

The school's plan to compress the traditional five-day school week into four longer instructional days provides an incentive for teachers to remain at the school, rather than seek transfer to other schools less remote from where they live. The plan also includes an optional enrichment program for students, parents, and community members on Fridays (Ma'ili SCBM Proposal, n.d.).

A review of national research informed the Ma'ili Elementary School faculty that across the nation school districts in fourteen states were on a four-day school week schedule. However, none of the school districts had students on campus on the fifth day. Students simply stayed home. At Ma'ili, however, Friday's enrichment program was designed to:

- provide students with additional instructional time as well as instruction that they could not otherwise have access to;
- expand opportunities for meaningful parent-child interaction;
- promote increased parental and community involvement and participation at the school;
- foster the growth of parents and community members through learning experiences provided by the school.

Examples of enrichment classes offered include ceramics, piano, computer education, mathematics manipulations, storytelling, health and physical education,

dancing, and singing. Friday's instructors are retired teachers, teachers on the staff, members of professions, district and state Department of Education staff, community representatives, and others.

Regular classes occur Monday through Thursday. Classes start at 7:30 in the morning and end at 2:30 in the afternoon on Monday, Tuesday, and Thursday. Classes end at 2:05 in the afternoon on Wednesday for faculty meetings.

There is a participation rate of 70-80% of students in the Friday optional program. Major reasons for student non-participation include parents' desire to spend more time with their children and/or to have the non-participating child assist with home chores, such as baby sitting. Students whose parents choose not to have them participate in Friday's enrichment program are given passes so that they are not considered to be truant by the police (Young, 1992).

The school reports no negative consequences to students because of the longer school day on Monday through Thursday. Conversely, numerous benefits are evident. These include the following:

- Student attendance has improved from a 9.4% absentee rate to 6% during the first semester of the initial year of implementation.
- Student referrals for disciplinary reasons have decreased from 203 referrals in the semester prior to implementation to only 75 referrals during the first semester of the initial year of implementation.
- There is less milling around and disruptions by students during the school day than previously.
- There is increased parental and community involvement. More parents provide volunteer services in their children's home-rooms and for the school, parental attendance at open houses has increased, and more parents are participating in workshops for parents.
- There has been less vandalism and little, if any, graffiti.
- Most significantly, the number of teachers requesting transfers out of the school has been reduced! In 1991-92, the transfer rate was 9%, as opposed to the transfer rate of 43% in 1988-89 and 1989-90 (Young, 1992).

Ha'aheo School's 4-Day Schedule

Interest in Ma'ili Elementary School's modified schedule is growing. Ha'aheo Elementary School on the island of Hawaii, also an SCBM school, has been granted a waiver request to implement its version of the four-day school week schedule. Called "Four-Plus-One," the school's schedule provides one day a week for teachers to work on curriculum reform. It works as follows:

- Required instructional time occurs Tuesday through Friday during a 4-day school week for students. Students are given the option of attending an enrichment program on Monday.
- Monday remains a teacher workday, reserved for collaborative planning, curriculum development, and staff development. Teachers who participate in professional development efforts beyond the teachers' work week are eligible to receive stipends, or University of Hawaii or Department of Education "B" credit.

It should be noted that implementation of the Four-Plus-One Program at Ha'aheo Elementary School is for the 1992-93 school year only (4+1 Proposal, 1992).

Kosrae's "Green Day" Schedule

In 1987 the Governor of Kosrae issued a mandate to implement "Green Day." Each Friday was set aside for fishing and farming, both to improve the island's self-sufficiency and to preserve traditional skills and knowledge. All government departments, including the Department of Education, had to go on a four-day work week in order to observe Green Fridays. Public school students were also to be involved in Friday fishing and farming activities. In 1992, the new Governor repealed Green Day and all governmental departments reverted to a five-day week schedule (Kephas, 1992).

Conclusions/Implications

Not all the evidence is in, but in general modified school schedule innovations seem to be working. Research on the implementation of year-round schooling provides no clear-cut evidence of student academic gains. In addition, social, behavioral, and financial benefits vary across sites and scheduling models. What a review of year-round schooling indicates is that successful implementation of this type of scheduling is dependent on a host of contextual or situational factors (PREL, 1992).

Evaluations of the four-day school week indicate that, in general, this innovation "has worked." The new schedule may not work in urban areas, but it has demonstrated its effectiveness in small/rural school districts. More years of testing will provide a more definable answer on whether students can actually learn as much in four days of instruction as in five days. To date, the results are very positive and encouraging (Grau & Shaughnessy, [1987]).

One implication of what has been learned from the implementation of year-round schooling and the four-day schedule is that "teaching smart" or making more efficient use of available learning time could well be the best way to promote more effective learning. This is the attitude that has been taken by those who have challenged the traditional school calendar. Another implication is that, given the diversity of the schools in the Pacific, considering non-traditional practices may be an essential feature of educational restructuring or school improvement.

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